Responsibility Attitude in a Sample of Iranian Obsessive-Compulsive Patients

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RESPONSIBILITY ATTITUDE IN A SAMPLE OF IRANIAN OBSESSIVE-COMPULSIVE PATIENTS

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ABSTRACT

Background: The study of distorted beliefs about responsibility attitude and interpretation has become the central theme in Salkovskis' (1985) and Rachman and Hodgson's (1980) models of Obsessive-Compulsive Disorder (OCD).
Aims: The aim of this research is to assess the responsibility attitude in Iranian OCD patients.
Methods: Twenty OCD patients were selected through available sampling from the case referred to psychology clinics. Two other patient groups comprised of 20 non-OCD anxiety disorder patients and 20 non-clinical participants were also chosen as comparison groups. All participants completed the Responsibility Attitude Scale (RAS) and Responsibility Interpretation Questionnaire (RIQ).
Results: Analyses revealed statistically significant differences between OCD group and comparison groups on both RAS and RIQ. In addition, both RAS and RIQ scores were associated with the severity of OCD assessed by the Yale-Brown scale.
Conclusions: These findings suggest that responsibility attitude and interpretations are the prominent features of OCD in Iranian patients and are associated with the severity of illness.

INTRODUCTION

Several theoretical models for obsessive-compulsive disorder (OCD) have been proposed. One model, proposed by Salkovskis (1985) focuses on the differences between OCD patients and normal individuals in appraisal of intrusive thoughts. Intrusive cognitions are normal phenomena that are universally experienced. In fact, it has been shown that approximately 90% of the population have intrusive cognitions whose content is difficult to distinguish from that of obsessions (Jenike *et al*., 1998). Whereas most people simply ignore these phenomena, people with OCD pay attention to them and believe them to be important. The nature and extent of the attention given to these intrusive thoughts depend on a set of underlying beliefs and assumptions about them. Among people with OCD, these beliefs are characterized by an exaggerated sense of responsibility for causing or failing to prevent harm to oneself or others (Jenike *et al*., 1998). Thus, Salkovskis and colleagues (1985, 1998, 2000) and others (e.g. Freeston *et al*., 1996; Rachman, 1997, 1998) have argued that the key

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to cognitive-behavioral conceptualizations of obsessional problems lies not in an examination of characteristics of intrusive cognitions, but rather in the way in which they, and their occurrence, are interpreted/appraised.

These appraisals (negative automatic thoughts) may take the form of exaggerated assumptions about whether actual harm can result from the intrusive thoughts themselves (e.g. thinking about an action may lead to the occurrence of the action: 'thought-action fusion' (Shafran *et al*., 1996) and about the extent of responsibility for preventing harm to oneself or others (e.g. failing to prevent harm relating to the thought is the same as having caused the harm directly).

Several types of dysfunctional assumptions have been proposed to characterize and differentiate OCD from normal intrusions (Salkovskis, 1985, 1996). These assumptions emphasize inflated senses of personal responsibility and self-blame in obsessive-compulsive belief system. Salkovskis (1989) posits that persons with OCD may not actually overestimate the probability of responsibility or blame for harm as a result of above. Neutralization occurs primarily in the context of negative automatic thoughts pertaining to strong feelings of responsibility or guilt. In fact, the probability of performing compulsions is greater in patients with OCD who hold strong beliefs in their individual responsibility for the potential consequences of their unwanted thoughts than OCD patients who don't have such beliefs (Millon *et al*., 1999).

Responsibility, in this context, has been defined as: 'The belief that one has power which is pivotal to bring about or prevent subjectively crucial negative outcomes' (Salkovskis *et al*., 2000). This sense of responsibility leads both to a negative mood (anxiety and depression) and the motivation to engage in neutralizing behaviors.

The cognitive hypothesis of OCD explicitly specifies two levels of responsibility-related cognitions: responsibility assumptions (attitudes) and responsibility appraisals (interpretations). To understand the psychopathology of obsessional problems more fully both responsibility attitudes and appraisals and their interactions need to be examined (Salkovskis *et al*., 2000). Nevertheless, the large body of theoretical literature on the role of responsibility attitudes and appraisals in the psychopathology of OCD (Foa & Steketee, 1983; Salkovskis, 1985, 1989, 1996, 2000; Rachman, 1993;) is not matched by much empirical research on this topic. In a recent study that compared OCD patients with other anxiety disorders and a non-clinical comparison group, Salkovskis *et al*. (2000) concluded that responsibility attitudes and interpretations are the core concepts in obsessional problems.

The present paper evaluates the extent and specificity of both responsibility assumptions and appraisals in obsessional patients and two comparison groups (including patients suffering from anxiety disorders and non-clinical participants). It is hypothesized that intrusive thoughts among the OCD patients would be associated with responsibility appraisals. We set two hypotheses: 1) The responsibility attitudes in obsessional group are higher than the comparison groups; and 2) The responsibility interpretation in obsessional group is higher than the control group. The inclusion of a comparison group with other anxiety disorders in the present study allows for evaluating of the specificity of any findings to OCD. In addition, since the scales used in this study (Responsibility Attitude Scale and Responsibility Interpretation Questionnaire) are administered for the first time in Iran, we also examined the psychometric characteristics for these scales in this sample.

METHOD

Participants

Participants consisted of 20 subjects (13 male, 7 female) diagnosed by a psychiatrist as meeting the Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV) criteria for OCD (American Psychiatric Association, 1994). The two comparison groups consisted of a sample of 20 subjects (8 male, 12 female) who met the criteria for anxiety disorders other than OCD, and another sample of 20 non-clinical participants (11 male, 9 female). The OCD patients were mostly referred to the psychology clinic by a psychiatrist for assessment and/or cognitive therapy. Participants in the non-clinical comparison group were recruited from the community.

The participants in the obsessional and anxiety comparison groups did not have any pharmacological or psychological treatment experience before and it was their first treatment contact. The exclusion criteria were OCD due to general medical conditions, a diagnosis of substance abuse and other psychiatric diagnosis in axis *I*. An attempt was made to match the comparison groups to the OCD patient group with regard to age and other demographic characteristics.

Measures

1. *Responsibility Attitude Scale* (*RAS;* Salkovskis *et al*., 2000). This scale consists of 26 items designed to assess general beliefs about responsibility. Ratings are on a 7-point Likert scale. The total RAS score is the sum of scores on the 26 items. Salkovskis *et al*. (2000) found RAS to be a reliable and valid measure. In a pilot study with the Persian translation of the test on another sample of 20 OCD patients, the estimated reliability was $\alpha = 0.67$. The internal consistency of the 26 items of RAS was assessed using Cronbach's alpha, giving $\alpha = 0.89$. The cut-off point was 130 with sensitivity 70%, specificity 90%, false positive 30% and false negative 10%.
2 *Responsibility Interpretations Questionnaire* (*RIQ;* Salkovskis *et al*., 2000). This 22-items questionnaire was designed to assess the frequency of and the extent of belief in specific interpretations of intrusive thoughts about possible harm. Scores on each item range from 0 to 4, assessing the occurrence of intrusive thoughts. Having rated the frequency for each of the items, participants are asked to rate the extent to which they believe these interpretations at the time. Ratings of extent of belief range from 0 to 100. The remaining six items as a part of RIQ were interspersed amongst these and related to low responsibility interpretations. Salkovskis *et al*. (2000) found high reliability and validity for this scale. The psychometric properties of the Persian translation of the test were assessed on a separate sample of 20 OCD patients. Reliability was examined with Spearman-Brown Prophecy Formula. Correlation coefficient was 0.95 for the frequency of high responsibility interpretations, 0.50 for the low responsibility interpretations, 0.93 for the extent of belief in the high responsibility interpretations, and 0.82 for the belief in the low responsibility interpretations. The internal consistency of RIQ, assessed using Cronbach's alpha was 0.69 for the frequency of the low responsibility interpretations, 0.96 for the extent of belief in the high responsibility interpretations, and 0.95 for the belief in the low responsibility interpretations. The reliability and internal consistency is satisfactory for the high responsibility interpretation factors, but was not considered satisfactory for the low

responsibility interpretations. The cut-off point for frequency of responsibility interpretations was set at 2.20 with sensitivity 85%, specificity 90%, false positive 15% and false negative 10%. The cut-off point for the belief of responsibility interpretations was set at 52 with sensitivity 70%, specificity 90%, false positive 30% and false negative 10%.

3. *Beck Depression Inventory* (*BDI;* Beck *et al*., 1979). A commonly used self-rating inventory for depressive symptoms; BDI comprises 21 items covering mood, self-esteem, sleep, appetite, guilt feelings and suicidal ideation. Scores on each item range from 0 to 3, yielding a possible maximum total score of 63.
4. *Maudsley Obsessive Compulsive Inventory* (*MOCI;* Hodgson & Rachman, 1977). MOCI is a self-rating instrument comprised of 30 true/false items. Maximum score for the total scale and for each subscales (checking, cleaning, slowness and doubting) are 30, 9, 11, 7 and 7, respectively (some items contribute to more than one sub-scale; therefore the total score is less than the sum of sub-scale score). This inventory is widely used and has adequate validity and reliability (Rachman & Hodgson, 1980). The Persian language version of the test has been used in this setting before (Ghassemzadeh *et al*., 2002).
5. *Yale-Brown Obsessive Compulsive Scale* (*Y-BOCS*; Goodman *et al*., 1989). This symptom checklist includes more than 60 symptoms organized according to 15 separate categories of obsessions and compulsions. It is divided into three major sections: a symptom inventory organized by category, a target symptom list, and a 10-items severity rating scale.
6. *Beck Anxiety Inventory* (*BAI;* Beck *et al*., 1988). This inventory is a commonly used and validated 21-items self-report measure. It was developed to assess the severity of anxiety symptoms.

Procedure

In order to confirm the psychiatric diagnoses, all participants completed three scales: MOCI, Y-BOCS and BAI. Participants with significant depressive symptom (a score of 21 or more on BDI) were excluded from the study. Table 1 details the scores of these scales for each group.

These results indicate that both comparison groups differed from obsessional group on obsessionality, but the non-clinical group differed on anxiety and depression. Therefore, any differences found between the OCD and the non-OCD anxiety comparison groups were likely to be due to obsessionality. Finally, all the subjects completed two main scales

Table 1
ANOVA results for demographic and psychometric data for obsessional, anxious and non-clinical groups

	Groups			
Gender **Measure**	**Obsessional** 13 male 7 female	**Anxious** 8 male 12 female	**Non-clinical** 11 male 9 female	**Statistical tests** $\chi^2 = 2.45$ $p = 0.2$
Age, Mean (*SD*)	35.10 (9.32)	32.10 (5.19)	33.85 (6.43)	$F = 0.557$
MOCI, Mean (*SD*)	15.80 (2.86)	8.30 (1.89)	4.75 (2.17)	$F = 115.86$*
Y-BOC, Mean (*SD*)	25.15 (3.76)	9.90 (3.18)	4.50 (1.82)	$\chi^2 = 49.06$**
BAI, Mean (*SD*)	24.85 (7.76)	35.55 (8.67)	9.25 (1.83)	$\chi^2 = 83.95$**

* $p \leqslant 0.0001$** $p = 0.0001$

in this study: Responsibility Attitude Scale (RAS) and Responsibility Interpretation Questionnaire (RIQ).

RESULTS

As mentioned earlier, the frequency of low responsibility interpretations on IRQ did not show adequate reliability, despite good internal consistency. For this reason, the scores of the low responsibility interpretation were not analyzed further.

Comparison of the responsibility attitude across groups

Our first hypothesis was that the responsibility attitudes in obsessional groups are higher than comparison groups. To test this hypothesis, we compared groups on RAS. Analysis of variance (ANOVA) and Scheffe test for post-hoc tests accomplished comparing the means of RAS across the three groups. Multiple comparisons on the RAS showed that obsessional subjects have significantly higher mean scores on the RAS than non-clinical control subjects ($p < 0.001$) and than anxious control subjects ($p < 0.001$). Scores of the RAS for each group are shown in Table 2 and Figure 1.

Comparison of the responsibility interpretation across groups

Our second hypothesis was that the responsibility interpretation in obsessional group is higher than control groups. To test this hypothesis we compared the three groups on RIQ using ANOVA and Scheffe test for post-hoc comparisons. Results showed that obsessional participants had significantly higher scores on both frequency and extent of belief than the non-clinical comparison group and than the comparison group with other anxiety disorders ($p < 0.001$). Results of these analyses are shown in Table 2 and Figure 2.

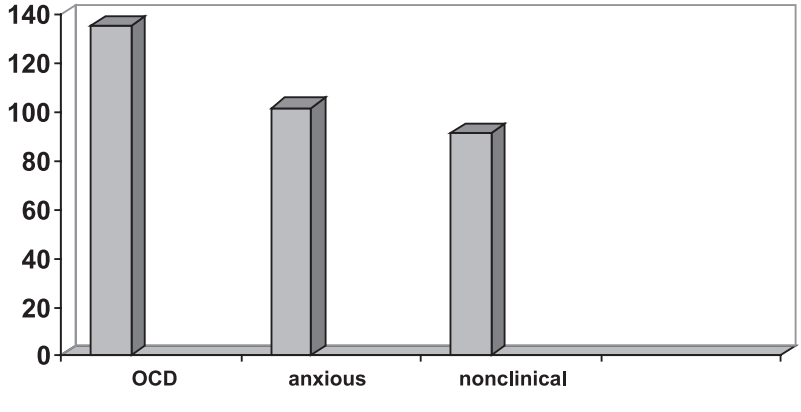

Figure 1. Mean scores of RAS

Table 2
Mean and Standard Deviation of the scores of obsessional patients and control groups for the RAS and RIQ

	Groups			
Gender Measure	**Obsessional ($N = 20$)**	**Anxious ($N = 20$)**	**Non-clinical ($N = 20$)**	**Statistical tests**
RAS, Mean (*SD*)	13.15 (17.12)	101.60 (21.27)	91.15 (25.37)	$F = 22.83$*
RIQ				
Frequency, Mean (*SD*)	2.610 (0.72)	1.59 (0.61)	1.02 (0.90)	$F = 33.53$**
Belief, Mean (*SD*)	58.52 (16.21)	43.98 (17.56)	23.06 (9.25)	$\chi^2 = 36.20$**

* $p \leqslant 0.0001$ ** $p = 0.0001$

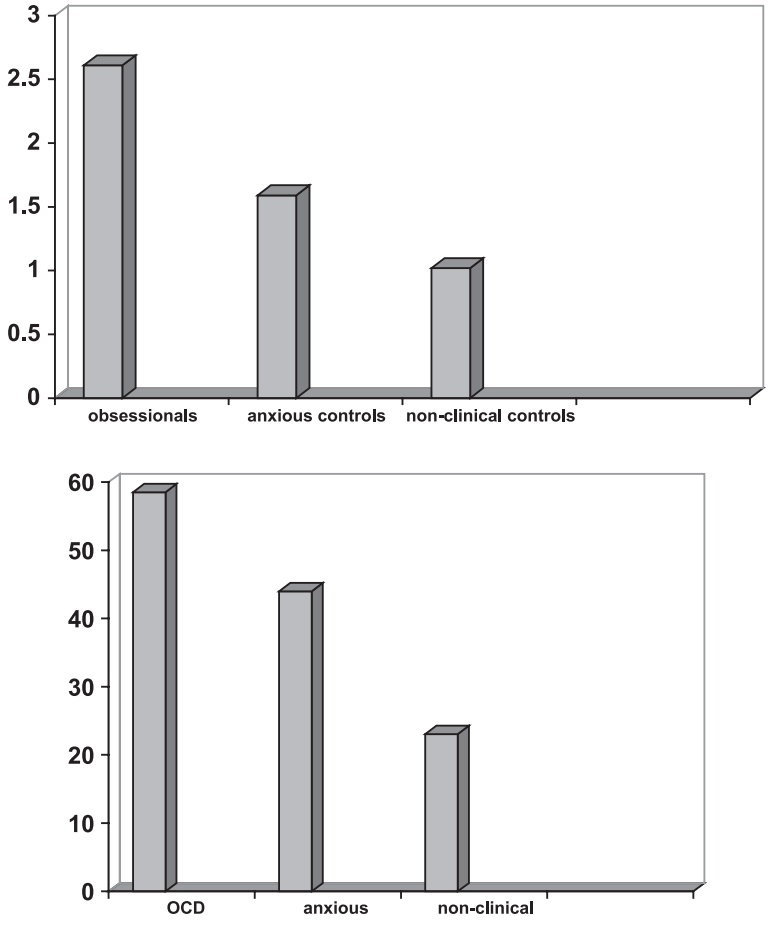

Figure 2. Mean scores of frequency and belief of high responsibility interpretations of RIQ

Comparison of the relations between the responsibility attitudes and interpretations, and OCD symptoms

Regression analysis was carried out in order to investigate the relations between the two responsibility questionnaires (RAS, RIQ) and the obsessional symptoms as assessed by Y-BOCS. Scores of the BDI, BAI, BAS and RIQ (FRIQ, BRIQ) were allowed to enter in stepwise regression analyses as independent variables. Y-BOCS scores were entered as the dependent variable. In these regression analyses, frequency of high responsibility explained 50% of the Y-BOCS variance (frequency of high responsibility had the highest correlation with Y-BOCS score, $r = 0.711$, $p < 0.001$).

It may be argued that high scores of the RIQ indicate high levels of anxiety and/or depression rather than being measures of factors having a specific association with OCD symptoms. In order to investigate this possibility, a further analysis was carried out in which anxiety and depression scales were forced in first, followed by the responsibility scale. When the Y-BOCS was used as a dependent variable, the BDI and BAI were not found to explain any of the variance at a statistically significant level. The next variable to enter was the RAS scores, which had the highest correlation with Y-BOCS after FRIQ, although it explained only 0.08% of Y-BOCS variance. In the other words, the frequency of high responsibility interpretation and responsibility attitudes explain 0.58% of Y-BOCS together. ANOVAs showed that this correlation was significant ($p < 0.0001$). Table 3 shows the result of regression analysis.

The result showed that these factors have significant correlation with obsessional symptoms and can explain 0.58% of Y-BOCS variance together. The predictive equation is:

$$Y = 0.421 - 0.874(\text{FRIQ}) + 0.124(\text{RAS})$$

DISCUSSION

In the present study, first of all, we found that the two scales that were used have adequate reliability and validity in our patients. As mentioned earlier, these scales were used for the first time in Iran. The results showed that they are useful and appropriate for measuring responsibility attitudes and interpretation in Iranian patients. This is the first report on responsibility attitude and interpretation in an Iranian sample of OCD patients. The results

Table 3
Independent variables RAS predicting the total score on the Y-BOCS

Independent variables	Correlation	*F*
FRIQ	0.711	59.18*
BRIQ	0.195	1.484
RAS	0.25	39.51*
BDI	−0.015	−0.114
BAI	0.125	0.97

* $p \leqslant 0.001$

showed that RAS was appropriate for this purpose, but the frequency of low responsibility did not have satisfactory reliability. This part of the results is not consistent with Salkovskis *et al.* (2000) findings. They found that the belief of low responsibility interpretation did not have adequate reliability, but in our work, we found satisfactory reliability and internal consistency for this part of RAS.

There have been previous reports of excessive responsibility in obsessionality, although few of these studies have included samples of OCD patients and fewer still have included anxious control group as a comparison group. For example, Freeston *et al.* (1993) developed a questionnaire about beliefs concerning intrusive thoughts and responsibility, the control of such thoughts and their possible consequences, and appropriateness of guilt and neutralizing behaviors as a response. They found a significant relationship between obsessive-compulsive symptoms and beliefs about obsessions in 87 non-clinical subjects and 14 OCD patients. There have been some studies that tried to measure different aspects of OCD, especially intrusive thoughts and excessive responsibility. But for the first time, Salkovskis *et al.* (2000) have measured the responsibility attitudes and interpretation in OCD empirically, and this study is almost a replication of their study in Iranian OCD patients.

The results of this study are consistent with the theory that people suffering from obsessional problems experience an inflated sense of responsibility for possible harm, linked to the occurrence and/or content of intrusive cognitions. Appraisals involving responsibility for causing or perverting harm are important because it is hypothesized that these appraisals, rather than the intrusions per se, are distressing and motivate attempts to neutralize intrusions (Rachman, 1993).

The present study shows that (a) obsessional patients are more likely to confirm responsibility beliefs and assumptions than are non-obsessional patients, and (b) obsessional patients are more likely to make responsibility related appraisals of intrusive thoughts about possible harm. Also, there was evidence of a correlation between responsibility cognitions and the occurrence of compulsive behavior. The findings suggest that the responsibility cognitions are specific to obsessional patients and differentiate these patients from other anxious patients as well as non-clinical participants. Both the OCD and the non-OCD anxiety group experienced heightened levels of anxiety and depression, but the responsibility beliefs and interpretations distinguished the OCD group from the other group. These findings have implications for clinical work, especially in cognitive behavior therapy with obsessive-compulsive clients. One application would be to use measures of responsibility as outcome measures to assess the effectiveness of cognitive-behavior therapy for OCD.

The multiple regression analyses demonstrate that both types of responsibility measures make unique and substantial contributions to the prediction of scores on measures of obsessional symptoms. Furthermore, the results of this study indicate that the frequency of high responsibility was strongly associated to symptoms of OCD, and that responsibility attitude was also associated with OCD symptoms but less strongly. Depression and anxiety did not have any specific and significant association with OCD symptoms, as belief of high responsibility did. These findings are in the same direction as the results of the Salkovskis *et al.* (2000) study. Consistent with that study, we found that responsibility measures did not make a unique contribution to the prediction of depression and anxiety symptoms. The present findings about inflated responsibility assumptions and appraisal in obsessional patients are consistent with the cognitive-behavioral theory.

To our knowledge this is the first study conducted in a middle-Eastern or even in a non-Western country in which the association of sense of responsibility and OCD was examined. Previous studies of the phenomenology of OCD from middle-Eastern settings generally did not address responsibility as a concept or a clinical feature of this condition (Okasha, 1977; Mahgoub & Abdel-Hafeiz, 1991; Egrilmez *et al*., 1997; Shooka *et al*., 1998; Ghassemzadeh *et al*., 2002;). It is debatable whether the sense of responsibility is an inherent feature of OCD or is a response to socio-cultural factors associated with OCD in certain settings. Examining this association across cultures could inform this debate. Similar responsibility features in OCD patients from different socio-cultural settings would support the view that inflated sense of responsibility is an inherent characteristic of OCD – a condition that occurs with remarkable consistency in different cultural settings (e.g. Al-Issa & Oudji, 1998).

However, from a cognitive-behavioral perspective, the origin of particular negative appraisals lies in learned assumptions, which in turn, are mostly dependent on cultural and social framework. These assumptions may include not only beliefs about harm and responsibility, but also about the nature and implications of intrusive thoughts themselves, as in the religious notion of 'sin by thought' (e.g. 'thinking something wicked is as bad as doing it'). The occurrence of an intrusive thought or impulse concerning some extreme and unacceptable action would, for someone holding this belief, result in very negative appraisals and consequent efforts to prevent or 'undo' such thoughts or prevent their recurrence (Salkovskis *et al*. 2000, pp. 348–9). It would, therefore, be important to replicate this study in different Western as well as non-Western countries, using instruments with a satisfactory degree of reliability, consistency and validity. We consider the present study as a first step toward this end.

In conclusion, our findings showed that it is possible to measure the responsibility attitude and interpretation in OCD patients. Furthermore, the results obtained in this study are consistent with the hypothesis that responsibility attitudes and interpretations are characteristics of obsessive-compulsive disorder.

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